

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/16673

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.<sup>7</sup> B24B37/00, B24B37/04, G11B5/73, G11B5/84

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.<sup>7</sup> B24B1/00, B24B37/00, B24B37/04, G11B5/73, G11B5/84

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Toroku Jitsuyo Shinan Koho	1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 2002-163817 A (Showa Denko Kabushiki Kaisha), 07 June, 2002 (07.06.02), Par. Nos. [0064] to [0065] & US 2002/0055017 A1	1-5, 10-12, 17 6-9, 13-16
Y	JP 1-115564 A (Sony Corp.), 08 May, 1989 (08.05.89), Page 4, upper right column, line 16 to lower left column, line 18; Fig. 1 (Family: none)	6-9, 13, 14
Y	JP 11-510743 A (Minnesota Mining and Manufacturing Co.), 21 September, 1999 (21.09.99), Par. No. [0037]; Fig. 1 & WO 1997/06927 A1	7

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

\* Special categories of cited documents:  
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 considered to be of particular relevance  
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 "I" document which may throw doubts on priority claim(s) or which is  
 cited to establish the publication date of another citation or other  
 special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other  
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 "P" document published prior to the international filing date but later  
 than the priority date claimed

"T" later document published after the international filing date or  
 priority date and not in conflict with the application but cited to  
 understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be  
 considered novel or cannot be considered to involve an inventive  
 step when the document is taken alone  
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 considered to involve an inventive step when the document is  
 combined with one or more other such documents, such  
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 "&" document member of the same patent family

Date of the actual completion of the international search  
14 May, 2004 (14.05.04)Date of mailing of the international search report  
01 June, 2004 (01.06.04)Name and mailing address of the ISA/  
Japanese Patent Office

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-16955 A (Kao Corp.), 17 January, 1997 (17.01.97), Par. Nos. [0021] to [0027] (Family: none)	8, 9
Y	JP 2000-132829 A (Hoya Corp.), 12 May, 2000 (12.05.00), Par. Nos. [0007] to [0009] & US 6383404 B1	15, 16